

Abstract Submitted  
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**Computational Analysis of Tritium Production from Lithium-6**<sup>1</sup> JENNIFER ZELENTY, University of Chicago, CHARLES GENTILE, Princeton Plasma Physics Laboratory, COURTNEY KAITA, University of Michigan, PRINCETON PLASMA PHYSICS LABORATORY COLLABORATION — Future fusion energy devices will require tritium as a fuel component. Due to its short half-life (12.3 years) and limited supply, tritium must be bred to keep up with future demands. At Princeton Plasma Physics Laboratory (PPPL) an effort is underway to produce tritium from lithium-6 using D-T neutrons. Utilizing a DT generator, lithium-6, in solid form, will be subjected to high energy neutrons for the purpose of creating tritium. In this investigation, computational transport codes are employed to simulate and evaluate this reaction. The codes are also used to determine optimal configuration and geometric parameters for this reaction. As data is obtained from the ongoing experiment, the empirical data will be compared to computational code predictions.

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